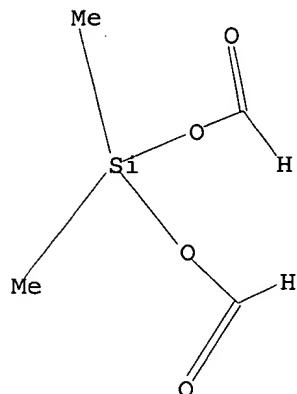


09/811/108

CAS ONLINE PRINTOUT ~~09/816,317~~

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L1 HAS NO ANSWERS
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Structure attributes must be viewed using STN Express query preparation.

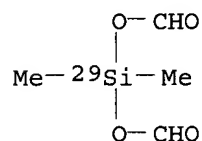
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FULL SEARCH INITIATED 14:21:16 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 14360 TO ITERATE

100.0% PROCESSED 14360 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

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L3 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2003 ACS on STN
RN 38737-68-7 REGISTRY
CN Silanediol-29Si, dimethyl-, diformate (9CI) (CA INDEX NAME)
MF C4 H8 O4 Si
LC STN Files: CA, CAPLUS



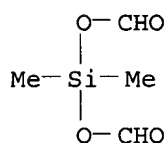
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN 77:113337 CA
TI Silicon-29 chemical shifts in methylsilyl carboxylates by heteronuclear magnetic double resonance
AU McFarlane, W.; Seaby, J. M.
CS Chem. Dep., City Lond. Polytech., London, UK
SO Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1972), (11), 1561-4
CODEN: JCPKBH; ISSN: 0300-9580
DT Journal

LA English
 AB The ^1H and ^{29}Si NMR chem. shifts of $\text{MenSi}(\text{O}_2\text{CR})_{4-n}$ ($n = 1-3$) correlated linearly with the electron-withdrawing abilities of the carboxylate group as detd. by the pK_a of the acid, RCO_2H . The relations indicated that the ^1H shielding depends upon the effective charge on Si whereas the ^{29}Si shielding varies with the electron imbalance of the Si-O bonds. p.pi.-d.pi. bonding was not invoked to account for the results.

L3 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2003 ACS on STN
 RN 16628-90-3 REGISTRY
 CN Silanediol, dimethyl-, diformate (8CI, 9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C4 H8 O4 Si
 LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN 138:179265 CA
 TI Method of forming low-k SiOC dielectric films
 IN Laxman, Ravi K.; Xu, Chongying; Baum, Thomas H.
 PA Advanced Technology Material, Inc., USA
 SO PCT Int. Appl., 44 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003015129	A2	20030220	WO 2002-US25002	20020806
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003064154	A1	20030403	US 2002-213395	20020806
PRAI	US 2001-310309P		20010806		
AB	The invention relates to a method of forming low-k SiOC dielec. films by chem. vapor deposition (CVD). The SiOC thin films are prepd. using organosilicon precursor compns. having at least one alkyl group and at least one cleavable org. functional group that when activated rearranges and cleaves as a highly volatile liq. or gaseous byproduct. In a first step, a dense SiOC thin film is CVD deposited from the organosilicon precursor having at least one alkyl group and at least one cleavable org.				

functional group, having retained at least a portion of the alkyl and cleavable org. functional groups. In a second step, the dense SiOC thin film is post-annealed to effectively remove the volatile liq. or gaseous byproducts, resulting in a porous low-dielec. const. SiOC thin film. The porous low-k SiOC thin films are useful as insulating layers in microelectronic device structures.

REFERENCE 2

AN 137:391342 CA
 TI Low dielectric constant thin films and chemical vapor deposition method of making same
 IN Laxman, Ravi K.; Xu, Chongying; Baum, Thomas H.
 PA USA
 SO U.S. Pat. Appl. Publ., 16 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002172766	A1	20021121	US 2001-811106	20010317
PRAI	US 2001-811106		20010317		

AB This invention describes a CVD process for producing low-dielec. const., SiOC thin films using organosilicon precursor compns. having at least one alkyl group and at least one cleavable org. functional group that when activated rearranges and cleaves as a highly volatile liq. or gaseous byproduct. In a 1st step, a dense SiOC thin film is CVD deposited from the organosilicon precursor having at least one alkyl group and at least one cleavable org. functional group, having retained therein at least a portion of the alkyl and cleavable org. functional groups. In a 2nd step, the dense SiOC thin film is post annealed to effectively remove the volatile liq. or gaseous byproducts, resulting in a porous low-dielec. const. SiOC thin film. The porous, low dielec. const., SiOC thin films are useful as insulating layers in microelectronic device structures. Preferred porous, low-dielec. SiOC thin films are produced using di(formato)dimethylsilane as the organosilicon precursor.

REFERENCE 3

AN 123:199671 CA
 TI Cyclic ether polymerization using silicon compound accelerators
 IN Drysdale, Neville Everton
 PA du Pont de Nemours, E. I., and Co., USA
 SO PCT Int. Appl., 32 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9502626	A1	19950126	WO 1994-US7591	19940714
	W: JP, KR				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5478920	A	19951226	US 1993-93242	19930716
	EP 708793	A1	19960501	EP 1994-922098	19940714
	R: DE, ES, GB, NL				
	JP 09500162	T2	19970107	JP 1995-504611	19940714
PRAI	US 1993-93242		19930716		
	WO 1994-US7591		19940714		

AB When selected silicon compds. are added to cationic polymns. of cyclic ethers such as oxiranes and tetrahydrofurans, the rate of polymn. is often

increased, and novel polyethers are produced. The polyether products are useful as monomers and macromonomers, particularly after hydrolysis of silicon contg. end groups.

REFERENCE 4

AN 67:3828 CA
TI Water repellent glass and removal of insect residues therefrom
IN Johnson, Robert Bird
PA Boeing Co.
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 3313648		19670411	US	19610328
AB	Organosilanes are used to render glass, i.e., aircraft windshields, and polymer films water repellent and easily partable from insect residues or casting molds. Thus, a solid glass aircraft windshield was given a 1/8 in. coating of silica aerogel contg. 94.5% perchloroethylene and, after 10 min., polished with cheesecloth. The glass was scrubbed with a soln. (I) contg. water 100, Na dodecylbenzenesulfonate 0.25, Na silicate 0.25, Na phosphate 0.20, and MeOH 100 parts and dried. A parting agent comprising 6 parts silica aerogel and 100 parts of a mixt. of MeSiCl ₃ and Me ₂ SiCl ₂ was rubbed onto the surface and, after 10 min., polished from the glass. In a wind tunnel, grasshoppers, crickets, and bees were blown against the glass at 170-450 knots, and JP-4 fuel was flushed across the glass followed by sufficient I to remove the film left by the fuel. Both the insect residue and film were rapidly removed. (AcO) ₂ SiMe ₂ , (AcO) ₃ SiMe, (HCO ₂) ₂ SiMe ₂ , (HCO ₂) ₃ SiMe, and Et ₂ SiCl ₂ were similarly used to render glass water repellent and to prep. mold coatings, i.e., from poly(vinyl alc.), cellophane, or poly(vinyl acetate), which easily parted from molded articles.				

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